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Living and Working in a Regulated Area

# Asian Longhorned Beetle:

Massachusetts



## The Asian Longhorned Beetle in the United States

The Asian longhorned beetle (*Anoplophora glabripennis*) (Motschulsky) (ALB) is an invasive pest that arrived in the United States from Asia concealed in solid wood packing material—the pallets and crates used to transport goods from overseas. The ALB was first discovered infesting Brooklyn, New York, trees in 1996. Since then it has been detected in Chicago, Illinois (1998); Hudson County, New Jersey (2002); Middlesex and Union Counties, New Jersey (2004); and Worcester, Massachusetts (2008). The infestations in Chicago and Hudson County were declared eradicated in 2008.

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) is responsible for taking actions to exclude, eradicate, and/or control significant plant pests such as the ALB, as authorized by the Plant Protection Act (7 United States Code 7701 et seq.).



**Figure 1.** An adult ALB on a bark-stripped tree trunk.

## The Asian Longhorned Beetle Kills Trees

The ALB infests and kills many species of hardwoods, making the pest a serious threat to forest and urban trees alike. If the ALB were to move into the forested areas of the United States, the maple syrup and forestry products industries would be significantly impacted, as would tourism. Collectively, the tree species the insect favors are called ALB host trees.

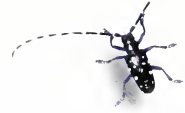
In late summer and fall, when the beetle is in its larval (caterpillar) stage, it bores deep into the heartwood of its host tree.

There, the larvae tunnel, feed, and develop over the winter. The following summer, they chew their way out of the host tree as adult beetles to mate and lay eggs, starting the process again with a new generation of beetles. Typically, adult beetles lay eggs in the same tree from which they emerged, making that tree host to generations of ALB if they are not stopped through eradication activities.



**Figure 2.** An ALB larva.

The larval tunneling weakens and eventually kills infested host trees. With no traps or attractants and no predators in the United States, the ALB has the potential to be one of the most destructive and costly invasive species ever to enter the United States.



*Figure 3. An ALB pupa.*

## ALB Host Tree Species

ALB host trees include all of the following species:

- Maple
- Elm
- Willow
- Birch
- Horsechestnut
- London planetree
- Poplar
- Ash
- Mimosa (silktree)
- Hackberry
- Mountain ash
- Katsura

## Containment Supports Eradication Efforts

Given the ALB's destructive potential, the APHIS goal is to eradicate the insect from the United States. To facilitate this, Federal and State agencies have taken legal actions to establish quarantine zones (called "regulated areas") around ALB infestations.

Three targeted, science-based ALB eradication activities take place in and around ALB-regulated areas: (1) surveys to inspect ALB host trees for signs of infestation, (2) treatments of host trees using the insecticide

imidacloprid to kill the beetles, and (3) removal of infested trees and, in some cases, high-risk exposed host trees. These are host trees near infested trees either at risk of becoming infested or so lightly infested that surveys cannot readily detect the ALB's presence. All handling of host material within the regulated area must follow the Federal and State regulations established to prevent the further spread of the infestation.

Individuals, businesses, and municipalities working with trees, nursery stock, cut wood, timber, woody debris, downed tree limbs, or firewood can help save trees by following the rules when living and working in regulated areas.



*Figure 4. Workers inspect a potentially infested tree.*

## Massachusetts ALB Cooperative Eradication Program Partners

To achieve ALB eradication in Massachusetts, APHIS partners with the Massachusetts Department of Conservation and Recreation, the Massachusetts Department of Agri-

cultural Resources, USDA's Forest Service, the City of Worcester, and local municipalities including Boylston, West Boylston, Holden, and Shrewsbury. Together, these organizations form the ALB Cooperative Eradication Program in Massachusetts.

## Regulations Prevent Unintentional Spread of ALB

The Federal and State laws that establish regulated areas around ALB infestations outline the conditions and requirements for moving regulated articles out of or within those areas. The Massachusetts Department of Conservation and Recreation issued the Massachusetts quarantine order in compliance with sections 8, 11, and 12 of Chapter 132 and section 1F of Chapter 132A of the Massachusetts General Laws. APHIS issued a Federal Order that mirrors the regulated boundaries of the State in fall 2008.



*Figure 5. Woody debris such as stumps and logs are regulated material.*



*Figure 6. In the training sessions, tree industry representatives learn about the ALB and how to identify its damage.*

## Regulated Articles and Their Movement

In Massachusetts, regulated materials include firewood of all hardwood species, as well as green lumber and other material living, dead, cut, or fallen. These materials include nursery stock, logs, stumps, roots, branches, and debris of one-half inch or more in diameter of all ALB host tree species. Regulated materials also include the ALB itself, its larvae, and its eggs.

In Massachusetts, no person may harvest, cut, move, carry, transport, or ship (or authorize or allow any other person to do the same) regulated articles within or outside of the regulated area unless they have authorization from the Commissioner of the Department of Conservation and Recreation. This authorization is only available through a compliance agreement with the ALB Cooperative Eradication Program.

In order for regulated articles to be moved **out** of the regulated area by a



company, individual, or business holding a compliance agreement, the wood must be chipped to less than one inch in two dimensions. Wood chips of this size are no longer a regulated article. Even if an insect were to survive the chipping machine, it could not develop through the various life stages and become an adult beetle due to the lack of moisture and nutrients in the chipped wood. Wood chips generated by the ALB program can be used for many purposes, including burning for energy.

Any company, business, or individual that does not hold a compliance agreement with the Massachusetts ALB Cooperative Eradication Program should not move regulated articles.

### **Compliance Agreement Required To Do Business**

In order to enter into a compliance agreement with the Massachusetts ALB Cooperative Eradication Program, all individuals and businesses (e.g., landscaping, construction companies, nurseries, tree removal services, fire-

wood dealers, and others) performing work in the regulated area—as well as companies that do any tree pruning or removal, or in any way handle wood from the ALB host tree species within the regulated area—must successfully complete a 1-hour workshop with Massachusetts ALB Cooperative Eradication Program regulatory officials. All employees of these businesses or companies are urged to attend this training.

At the conclusion of training, the compliance agreement will be signed by a business or company official.

A compliance agreement allows businesses, companies, and individuals access to approved sites for the disposal of woody debris. However, even those with a compliance agreement should not move any material if, based on their training, they believe it may be infested with ALB. Compliance agreement holders should call the Massachusetts ALB Cooperative Eradication Program immediately if they encounter a suspected ALB infestation.

A company or an individual homeowner cannot work with regulated articles within the Massachusetts ALB-regulated area if they do not have a compliance agreement.

For answers to questions about regulated materials and permits in Massachusetts, please call the ALB program toll-free at 1-866-702-9938.



*Figure 7. ALB compliance training session.*

## Living in ALB Regulated Area: Guidance for Homeowners

Due to the risk posed by transporting wood articles that may contain ALB, homeowners, property owners, or residents in the Massachusetts ALB regulated area should not move any regulated articles. Regulated articles include firewood of all hardwood tree species, as well as the other materials mentioned previously.

Homeowners and property owners should hire companies that have compliance agreements for working on ALB host trees. Those with compliance agreements have access to the



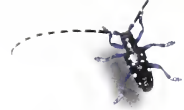
*Figure 8. Companies with an active compliance agreement can access the dedicated debris removal site in Massachusetts.*

specified areas where regulated materials may be disposed of safely. Companies holding compliance agreements have been issued stickers for use on their company vehicles. The compliance stickers can be found on vehicle windshields, state the ALB program name, and include an expiration date. This sticker lets property owners know that the company with which they are working has been trained in handling wood materials in an ALB-regulated area and has access to the designated wood disposal site.

Residents and homeowners should not move firewood. Firewood is an easy way that invasive species like the ALB travel, and this can cause infestations in new areas. Purchase your firewood where you will burn it. Firewood cannot be transported, given away, or sold within the regulated area unless it is moved by an individual, company, or business that holds a compliance agreement. Under no circumstances can firewood be moved from inside the regulated area to a location outside the regulated area.

Residents and homeowners can assist in the ALB eradication effort by allowing Massachusetts ALB Cooperative Eradication Program officials access to their private property to perform surveys (i.e., locate ALB host trees and inspect them for signs of infestation); remove infested trees and, in some cases, high-risk host trees near infested trees; or treat susceptible host trees with imidacloprid. ALB Program representatives will perform these inspections on residential and business





### Massachusetts ALB Eradication Program Compliance Sticker

Massachusetts  
Compliance Number

Vehicle Registration  
Number

Expiration Date: September 30, 2009

**Figure 9.** ALB program compliance sticker.

properties. Inspections are conducted from the ground and in tree canopies by certified tree climbers.

Residents and homeowners who live inside the regulated area and need to move brush, leaves, and twigs that are too small to be regulated articles may move these items to approved disposal sites. Residents should contact their local municipality for information on yard waste drop-off locations.

In the Massachusetts ALB-regulated area, State and Federal law prohibit any movement of *infested* items by homeowners or businesses performing tree or lawn work on private property. Only ALB Eradication Program representatives are permitted to dispose of infested tree material. There is no cost to homeowners for the removal of ALB-infested trees. The work will be completed by specified contractors of the Massachusetts ALB Cooperative Eradication Program.

### Don't Plant ALB Host Trees in a Regulated Area

Help limit the trees that supply ALB with food and shelter. Don't plant ALB host trees within the regulated area.

Tree species that are not ALB hosts should be planted instead. Contact the ALB Program at 1-866-702-9938 for a list of non-host tree species that can be planted safely in the regulated area.

ALB-infested trees and high-risk exposed host trees removed by the ALB Eradication Program may be eligible for replacement with trees that are not hosts for the beetle at no cost to property owners. ALB program personnel will provide information about tree replacement after they have removed infested trees.

### Watch for Signs of ALB Infestation

The adult ALB is a distinctive-looking insect measuring 1 to 1 1/2 inches long, not including its antennae. In females, the antennae are as long as the body itself; in males, they are almost twice the length of the body. The insect's body is shiny and black with irregular white spots, and its long antennae are banded in black and white.

When ALB adults emerge from the trunks and limbs of host trees, the insects leave behind exit holes. These



**Figure 10.** Only non-ALB host trees can be planted in regulated areas.

are perfectly round and about three-eighths of an inch in diameter. Developing larvae often push material called frass out onto the ground or onto tree branches as they tunnel about inside an infested tree. ALB-attacked trees also display small, roundish pockmarks in the bark on trunks or branches. These marks show where an adult female has chewed a depression to lay an egg. ALB-infested trees may



**Figure 11.** A tree trunk with multiple egg sites; close-up of egg site (inset).



**Figure 12.** A tree with multiple exit holes.

also display dead or dying limbs, premature yellowing leaves, and canopy dieback.

## The Regulated Area

To view the latest information regarding the location of the Massachusetts ALB-regulated area, please logon to [www.aphis.usda.gov](http://www.aphis.usda.gov) and click on “Asian Longhorned Beetle” under the “Hot Issues” heading. In the blue box to the right of the page, there are links for reporting infestations, identifying the ALB, and downloading maps of regulated areas and treatment areas. Maps of the regulated area can also be found on the City of Worcester’s Web site at <http://www.ci.worcester.ma.us/> or on the Web site of the Massachusetts Department of Agricultural Resources at <http://massnrc.org/pests/alb> or visit [www.beetlebusters.info](http://www.beetlebusters.info).



## Some Typical Questions and Answers

**Q.** *I normally save my fallen leaves for compost. Can I continue to do that, or should I dispose of them as yard waste?*

**A.** It is safe to compost your leaves as long as they do not contain woody material. Branches could harbor the eggs or larvae of the beetle and would have to be chipped to less than 1 inch in order to kill any life stages of the beetle. If you can't separate out the leaves and the branches, then take the leaves to a sanctioned homeowner disposal site for the material.

**Q.** *I live in the Massachusetts regulated area and want to take firewood from a tree that fell 2 years ago to our vacation home in Vermont. I don't know what kind of tree it was, other than it was not a fir tree. Do these rules include trees that have been down since before the regulated area was set?*

**A.** Yes. Firewood from that tree should not be moved outside of the regulated area. Firewood is regulated even if it comes from a tree downed before the regulated area was set in 2008. Please plan to burn that wood at your home in Massachusetts and purchase firewood in Vermont for your vacation home. Even after 2 years, that firewood could still harbor ALB larvae or pupae that could emerge to infest Vermont area trees. In fact, because the wood was cut, it could take that long for the larvae and pupae to develop and emerge.

**Q.** *I own a tree care company outside of the Massachusetts regulated area. Do I have to have a compliance agreement?*

**A.** In order to serve clients with property in the Massachusetts regulated area, your company would need to enter into a compliance agreement with the Massachusetts ALB Cooperative Eradication Program, even if the business is located physically outside of the regulated area's boundaries. If you were to perform work in the regulated area without that compliance agreement—either on purpose or inadvertently—you would be subject to a violation in accordance with Massachusetts law. The company owner would be held liable if its employees performed work within the regulated area without the proper authorization.

**Q.** *If I suspect tree work is being performed in violation of regulations or that wood is being moved in violation of regulations, should I call my local police or the Massachusetts Department of Conservation and Recreation?*

**A.** Any suspicious activity observed should be reported to the Massachusetts ALB Cooperative Eradication Program offices. There are staff members on call during business hours and on the weekend to address such issues. Please call 508-799-8327 immediately to report suspicious activity. Please leave a message for after-hours notifications.

**Q.** *My lawn service company performs work in the Massachusetts regulated area that includes pruning branches from trees. We have a compliance agreement with the Massachusetts ALB Cooperative Eradication Program. If I encounter a tree that looks like it has signs of ALB infestation, what should I do?*

**A.** During compliance training, companies are advised to report any signs of ALB infestation to the Massachusetts ALB Cooperative Eradication Program. You should not prune a tree suspected to be infested with ALB or remove any dead branches on the tree from the property. Please call the ALB Eradication Program at 1-866-702-9938 immediately to report a suspected infestation.

**Q.** *I am a homeowner and want to do business with a company, but I do not know if it has a compliance agreement. How do I find out if the company is certified to perform work in the Massachusetts regulated area?*

**A.** Companies that are compliance holders have been given a sticker that can be affixed to their vehicles indicating that they have access to all proper disposal sites for wood and woody debris. Compliance holders can also show you their compliance agreement. In addition, you may call the Massachusetts ALB Cooperative Eradication Program at 1-866-702-9938 to determine if a company is a compliance holder.

**Q.** *I recently had an ailing tree cut down by a company that said it had a compliance agreement. I don't know if it was a host tree, but it was a hardwood tree. The company failed to remove that tree from my property after cutting it down, saying it was my responsibility to move it. Is that correct?*

**A.** The company that cut down the hardwood tree should have moved it to the approved disposal site. Holding a compliance agreement allows the company to dispose of the wood properly. Please call the Massachusetts ALB Cooperative Eradication Program so that arrangements can be made to remove the wood from your yard. In the future, make sure that proper removal of cut trees is part of the contract for tree services. If another tree on your property is deemed to be infested with ALB, the Massachusetts ALB Cooperative Eradication Program will remove it at no cost to you, the homeowner.

**Q.** *I have a privet hedge on my property near a maple tree. I want to remove that hedge. Can I do so on my own?*

**A.** A privet hedge is not regulated material and can be removed. A company with or without a compliance agreement can do that work, or you, as the homeowner, may do it yourself.



**Q. Can wood chips be moved from the regulated area?**

**A.** Yes. Wood chipped to less than 1 inch in two dimensions is deregulated and may be removed from the regulated area freely. Chips could also be used as mulch inside or outside the regulated area, as no ALB populations live in wood chips.

**Q. I would like to plant a tree at my home to commemorate a special event. What kinds of trees can be safely planted on property I own in the Massachusetts regulated area?**

**A.** Although planting tree species that can host ALB populations is not advised while the area is undergoing eradication activities, there are a

variety of tree species that property owners can plant safely. Oak, spruce, linden, dogwood, crab apple, hawthorn, and evergreens are among tree species that are not ALB hosts. For a complete list of non-host trees or other guidance, please call the ALB Cooperative Eradication Program at 1-866-702-9938. You may also logon to [www.aphis.usda.gov](http://www.aphis.usda.gov) and click on "Asian Longhorned Beetle" under the "Hot Issues" heading. The site includes a tree planting list for regulated areas. It is also important to note that the ALB program includes a replanting component that will take place at no cost to the homeowner.

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